



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
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May 5, 2014

Mr. Gary D. Goeke  
Chief, Environmental Assessment Section  
Leasing and Environment (MS 5410)  
Bureau of Ocean Energy Management (BOEM)  
1201 Elmwood Park Boulevard  
New Orleans, LA 70133-2394

**Subject: EPA NEPA Review Comments on BOEM's DEIS for "Gulf of Mexico Outer Continental Shelf (OCS) Oil and Gas Lease Sales: 2015-2017 Central Planning Area Lease Sales 235, 241, and 247" CEQ #20140089**

Dear Mr. Goeke:

The U.S. Environmental Protection Agency (EPA) has reviewed the subject Bureau of Ocean Energy Management (BOEM) Draft Supplemental Environmental Impact Statement (DSEIS) in accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. It is our understanding that BOEM proposes lease sales in the Gulf of Mexico (GOM) Outer Continental Shelf (OCS) for lease blocks in the Central Planning Area. The proposed action covers lease sales of blocks 235, 241, and 247 in the Central Planning Area. EPA understands that this DSEIS is the final NEPA review for the proposed CPA lease sale 235 and that a separate NEPA review will be conducted prior to proposed CPA lease sales 241 and 247 to address any newly significant information relevant to the 241/247 lease sales.<sup>1</sup>

The EPA has participated in several recent NEPA reviews for BOEM actions, including reviews of the Draft Programmatic Environmental Impact Statement (PEIS) for the proposed 2012-2017 Outer Continental Shelf Oil and Gas Leasing Program and the 2012-2017 WPA/CPA Multisale EIS and WPA 233/CPA 231 Supplemental EISs which this current EIS supplements.

Based on our analysis of the above referenced proposed action, EPA rates this DEIS as "EC-2" i.e., EPA has "Environmental Concerns and Request Additional Information" in the Final EIS (FEIS). The EPA's rating system criteria can be found online at: <http://www.epa.gov/oecaerth/nepa/comments/ratings.html>. Our primary concerns associated with the proposed actions are related to potential impacts to air, coastal ecosystems, wetlands, mitigation, and level of detail provided in the document. Detailed comments are enclosed with

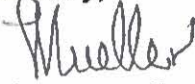
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<sup>1</sup> Regional Directors Note - DSEIS

this letter which more clearly identifies our concerns and comments. We request that the FSEIS include specific responses to our comments.

EPA appreciates the opportunity to review the DSEIS. Should BOEM have questions regarding our comments, please feel free to contact Dan Holliman of my staff at 404/562-9531 or [holliman.daniel@epa.gov](mailto:holliman.daniel@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Mueller", is written over the printed name.

Heinz J. Mueller  
Chief, NEPA Program Office  
Office Environmental Accountability

Attachment: Detailed Comments

**U.S. EPA DETAILED COMMENTS  
ON THE DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT  
(DSEIS) FOR THE U.S. DEPARTMENT OF THE INTERIOR, BUREAU OF OCEAN  
ENERGY MANAGEMENT (BOEM) GULF OF MEXICO OUTER CONTINENTAL  
SHELF (OCS) OIL AND GAS LEASE SALES: 2015-2017 CENTRAL PLANNING AREA  
LEASE SALES 235, 241, AND 247**

**BACKGROUND:**

The Draft Supplemental Environmental Impact Statement (DSEIS) was prepared by the U.S. Department of the Interior, Bureau of Ocean Energy Management (BOEM) Gulf of Mexico (GOM) Outer Continental Shelf (OCS) Region for lease areas in the Central Planning Area. A total of 3 federal lease sales are being proposed; lease sales in blocks 235, 241, and 247. EPA understands that the proposed lease sales for the blocks are tentatively scheduled for 2015, 2016, and 2017. EPA understands that the completion of this EIS will complete the NEPA / decision making process for lease sale block 235; however, additional the National Environmental Policy Act (NEPA) analysis will be conducted for final decisions on lease sale blocks 241 and 247. EPA also understands that this EIS supplements information covered in the following past NEPA documents: *Gulf of Mexico OCS Oil and Gas Lease Sales: 2012-2017; Western Planning Area Lease Sales 229, 233, 238, 246, and 248; Central Planning Area Lease Sales 227, 231, 235, 241, and 247, Final Environmental Impact Statement (2012-2017 WPA/CPA Multisale EIS) and Gulf of Mexico OCS Oil and Gas Lease Sales: 2013-2014; Western Planning Area Lease Sale 233; Central Planning Area Lease Sale 231, Final Supplemental Environmental Impact Statement (WPA 233/CPA 231 Supplemental EIS)*. EPA provided review comments on these previous BOEM EISs in accordance with our responsibilities under Section 102(2)(C) of NEPA and Section 309 of the Clean Air Act.

**ALTERNATIVES PROPOSED:**

**Alternatives for Proposed Eastern Planning Area Lease Sales 235, 241, and 247<sup>1</sup>**

- *Alternative A—The Proposed Action (Preferred Alternative):* This alternative would offer for lease all unleased blocks within the proposed CPA lease sale area for oil and gas operations with the following exceptions:
  1. whole and portions of blocks deferred by the Gulf of Mexico Energy Security Act of 2006; and
  2. blocks that are adjacent to or beyond the United States' Exclusive Economic Zone in the area known as the northern portion of the Eastern Gap.
- *Alternative B - The Proposed Action Excluding the Blocks Near Biologically Sensitive Topographic Features:* This alternative would offer for lease all unleased blocks within the

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<sup>1</sup> Alternatives section cited directly from p. ix in DSEIS

proposed CPA lease sale area, as described for the proposed action (Alternative A), but it would exclude from leasing any unleased blocks subject to the Topographic Features Stipulation.

- *Alternative C - No Action:* This alternative is the cancellation of a proposed CPA lease sale.

## **EPA COMMENTS:**

### **ALTERNATIVES**

In general, Alternative B (The Proposed Action Excluding the Unleased Blocks Near Biologically Sensitive Topographic Features) would be the more environmentally sensitive approach with regard to these resources targeted by this review. However, EPA assumes that a more detailed site specific analysis is forthcoming at the lease block level, as the lease sale process proceeds. EPA also assumes that this site specific analysis would identify the presence of biologically sensitive features, and if these areas are identified, appropriate mitigation measures would be implemented.

### **AIR**

The EPA is responsible for ensuring compliance with the National Ambient Air Quality Standards (NAAQS) in the Gulf States of Texas, Louisiana, Mississippi, Alabama and Florida. In addition, EPA Region 4 is responsible for implementing and enforcing Clean Air Act (CAA) requirements for OCS sources offshore the state seaward boundaries of all areas of the Gulf of Mexico (GOM) east of 87°30" (*see* CAA section 328). Pursuant to the CAA and applicable federal regulations (*see* 40 CFR 55), OCS activities, such as exploratory drilling operations and production platforms are subject to the EPA requirements to obtain air quality preconstruction and operating permits.

The air quality sections of the DSEIS, including *Appendix A - Air Quality Offshore Modeling Analysis*, were reviewed by EPA Region 4 APTMD.

### **2.2.2. Mitigating Measures**

As discussed in section 2.2.2, Mitigation Measures, "agencies are required to include, in the alternative chosen, relevant and reasonable mitigation measure that could improve the action." The DSEIS does not, however, discuss reasonable mitigation measures for air quality impacts. Section 2.2.2.2, Existing Mitigation Measures, indicates that air quality is among the over 120 "standard mitigation measures" that are applied by BOEM during plan and permit reviews. EPA recommends, consistent with NEPA regulations and guidance, that at a minimum, BOEM identify known technologies in the EIS that may be generally applied to offshore oil and gas operations (*see* 40 CFR 1508.20; Forty Questions No.19(a)) or provide a reference as to where the standard measures can be reviewed, such as on the BOEM website. EPA continues to suggest that reasonable mitigation measures that should be considered include the use of low sulfur fuels, inherently lower polluting engine designs, use of tier certified non-road and marine engines (rather than engines certified for export), electrification of cranes and support equipment,

fuel efficiency measures, and use of best available technologies. It was our understanding from EPA's meeting with BOEM in December 2013 that the TMS mitigation measures would be included or available as part of the EIS documents.

### **3.1.1.5. Air Emissions**

This section discusses the emissions sources related to OCS activities. EPA recommends that BOEM consider including well stimulation vessel activities in future analyses, as it is our understanding that these vessels are not currently included in the GOADS inventory.

### **4.1.1.1. Air Quality**

This section and the Executive Summary indicate that the CPA proposed actions are projected to have minimal impacts and are expected to be well within the National Ambient Air Quality Standards. This statement is not supported by the analysis given that the modeled emission results are above the EPA significant impact level (SIL) for the annual NO<sub>2</sub> standard and the 24-hour particulate matter of 2.5 microns or less (PM<sub>2.5</sub>) standard. The DSEIS concludes that the proposed activities will not affect the onshore air quality, since the model is conservative and approximated all sources at one location, and therefore actual operations might not violate the SIL. "All of the emissions during 1 year for the entire CPA, which would actually be dispersed throughout the CPA, were modeled as if they originated from Mississippi Canyon Block 856," page 4-9. The SIL is a screening tool used to indicate when further analysis is warranted. Hence, EPA recommends that a more refined analysis be conducted to validate the BOEM conclusion, as it is unclear what metrics were used for BOEM's determination, or under what conditions BOEM would consider the results of the analysis to be meaningful.

The model described on page 4-10, and in Appendix A, does not include VOCs. It is unclear how the emissions of VOCs were estimated. EPA recommends the EIS include clarification of the VOC analysis (It seems as though VOC emissions were most likely a part of the ozone studies, but this is not discussed.)

This section also indicates (top of 4-10) that BOEM used "known" emissions from various equipment. This statement is repeated in Appendix A. For clarity, EPA recommend that the EIS more accurately describe the emissions as "estimated," since the estimated emissions are based on emissions factors that contain significant uncertainty.

The statement in the *OCD Model* section, "Given that these very conservative estimates of emissions were modeled and are still below both agencies regulatory thresholds" page 4-10, contradicts the statements made on page 4-9, see above, that the EPA SIL was exceeded. EPA recommends that this statement be updated to adequately reflect the modeled results.

This section also indicates that: "with the movement of the bulk of activities to deep water, air emission-producing sources moving farther from shore. This further reduces the potential for air quality impact to onshore from a proposed CPA lease sale." EPA believes that this assumption is not a given, and should be verified or qualified. Deepwater vessels are dynamically positioned

and have significantly higher emissions than near-shore jack-up rigs – including significant emissions of PM that are readily transported onshore.

EPA continues to have concerns that the 2008 Gulf-wide Emissions inventory may not capture the extent of the higher emissions associated with increased deepwater exploratory drilling, and that some aspects of the analysis are not as conservative as BOEM has assumed, given our experience with emission factor and activity assumptions. EPA supports BOEM's commitment to conduct a variety of sensitivity analyses, updated emission inventories, and an evaluation of emission scenarios using USEPA-approved models, which will support BOEM's scientific analyses and overall assessment of air quality impacts in future EIS's, as mentioned in this section.

#### Greenhouse Gas Emissions (p. 4-11)

The DEIS indicates that a typical well site emits 237-439 tons per year of CO<sub>2</sub>e emissions. EPA is concerned that this emission range is in error, or perhaps may apply only to direct emission of methane, rather than CO<sub>2</sub>. This range would be the emissions from a small combustion source operating infrequently, and would not represent emissions from a turbine generator or large crane engines. For example, a single deepwater exploratory rig operating only 45-180 days per year has CO<sub>2</sub>e emissions of 30,000 – 100,000 tpy.

#### Cumulative impacts (4-13,15)

This section indicates that mobile source emissions contribute 50% of NO<sub>x</sub> emissions onshore. It is not clear from this section whether the marine vessel emissions associated with CPA activities have been addressed in relation to their contribution at coastal ports (i.e. not just when they are within 25 miles of a given lease activity). In addition, the summary of ozone precursor pollutants on page 4-15 appears to describe an inland urban environment. EPA recommends that this discussion be updated to include marine vessels and typical port emissions. Emissions from ports and associated vessels are making up an increasing percentage of the emissions inventory in coastal cities. In some cities, these emissions exceed the contributions from all automobiles. Given that there is a significant industry associated with servicing offshore oil and gas activities, EPA recommends that marine vessels, in terms of both the cumulative and CPA contribution (at the onshore ports) be addressed. The following link has additional information regarding the Administration's ports initiative: <http://www.epa.gov/otaq/ports/>

#### Appendix A. Air Quality Modelling Analysis

A Class I and Class II modeling procedure using the Offshore and Coastal Dispersion (OCD) was used to assess the project's affect at BOEM's shoreline and Breton National Wilderness Class I area. The OCD model developed project impacts at 90 km (shoreline) and at 153 km in the direction of Breton Wilderness Class I area. These impacts were used to assess the likelihood of project emissions causing ambient impacts in the Class I or Class II area greater than the Significant Impact Levels (SIL).

EPA understands that there are limitations to the reliability of all the various models for use on the OCS and has considered these limitations in our own analyses. Despite the appropriateness for overwater, the distances used in this analysis are beyond the stated reliable limits of OCD. Extrapolating the OCD modeling results for the Class I annual NO<sub>x</sub> SIL and Class II 1-hr NO<sub>2</sub> SIL and NAAQS is also beyond the reliable limits of the OCD model. EPA continues to recommend that CALPUFF modeling be performed for Class I annual SIL and Class II SIL and NAAQS for NO<sub>x</sub> and NO<sub>2</sub>, respectively.

The OCD Class I annual NO<sub>x</sub> concentrations at 153 km are greater than the applicable PSD SIL; EPA believes this indicates a need to perform long-range CALPUFF impact assessment.

The scope of the analysis was limited to onshore receptors. However, States are responsible for ensuring compliance with the NAAQS within State seaward boundaries, which extend 3 or 9 miles offshore. Consistent with NEPA guidelines, EPA suggests that the EIS not be limited to impacts to onshore receptors. An EIS serves as a document to provide an assessment of air quality impacts in general and to allow decision makers an insight into compliance with all applicable statutes and regulations, including the requirements of the CAA and applicability of the NAAQS within state seaward boundaries.

Errata: Super-scripts (a, b, c, d, and e) are missing references on Table A-4 page A-10.

#### **NPDES**

EPA notes that Sections 4.1.1.2.1, 4.1.1.2.2, & 4.1.1.18, and Table 3-3 include minimal information on the use of well stimulation fluids (i.e., “fracking fluids”). EPA notes that the potential for impacting benthic environments and surrounding water columns from the use of well stimulation fluids is not clearly understood.

#### **Recommendation:**

EPA recommends information on the trends pertaining to the volumes of well stimulation fluids used in well development, any available information on the formulation of these fluids, and fate and transport be included in the FSEIS. We also recommend that BOEM provide information relating how fracking is different from traditional well development (Will special vessels for fracking related operations be needed? How do these vessels impact BOEM’s impact analysis relating to vessel traffic? etc.)

#### **FISHERIES**

A recent study, “Deepwater Horizon crude oil impacts the developing hearts of large predatory pelagic fish”<sup>2</sup> which is part of the Deepwater Horizon Natural Resource Damage Assessment, seeks to determine the impact of the Deepwater Horizon spill on certain fish species. This study found that juvenile tuna and amberjack exposed to crude oil-derived polycyclic aromatic

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<sup>2</sup> “Deepwater Horizon crude oil impacts the developing hearts of large predatory pelagic fish” - [www.pnas.org/cgi/doi/10.1073/pnas.1320950111](http://www.pnas.org/cgi/doi/10.1073/pnas.1320950111)

hydrocarbons (PAHs) develop heart defects that will likely limit their ability to catch food and long-term survival.

**Recommendation:**

EPA recommends that BOEM consider this study when discussing the potential impacts of oil spills on fish species in the GOM in the FSEIS.

**WETLANDS AND COASTAL AREAS**

Coastal wetland systems are very sensitive systems that are increasingly stressed from all types of activities including but not limited to coastal development, maintenance dredging of channels, and oil and gas development. These systems are also stressed due to natural events such as hurricanes. Stresses on these systems are only predicted to increase with climate change and sea level rise.

A report by Stedman and Dahl (2008) on the status and trends of wetlands in coastal watersheds states that the “Gulf of Mexico coastal watersheds exhibited substantial losses in freshwater wetlands. This rate of loss was 6 times higher than the rate of freshwater vegetated wetlands losses in the Atlantic coastal watersheds. The estimated losses for all wetland types in the Gulf of Mexico were 25 times higher than those estimates for the Atlantic over the course of this study.”<sup>3</sup> This report also indicates that coastal areas along the panhandle of Florida, Alabama, Mississippi, Louisiana, and Texas are listed as areas of greatest coastal wetland loss in the Gulf of Mexico and that a “majority of the coastal wetland loss (61,800 acres per year) from 1998 to 2004 occurred in the Gulf of Mexico.”

**Recommendation/Comment:**

EPA appreciates BOEM’s efforts to better quantify historical wetland losses for coastal areas in the Central Planning Area and the current status of these systems.<sup>4</sup> As EPA has expressed in several previous NEPA comment letters, we remain concerned about the potential for cumulative impacts on near shore wetlands and coastal areas.

**ENVIRONMENTAL JUSTICE**

The federal action proposed under this DSEIS has the potential to impact EJ communities negatively and positively. The potential negative impacts on EJ communities involve oil spills that negatively impact communities that rely on commercial and recreational fishing, oystering, and subsistence fishing. Other negative impacts are associated with the oil-related infrastructure and its impact on minority and low-income communities. The infrastructure support system for oil- and gas-related industries in the GOM is highly developed, widespread, and has operated for decades within a heterogeneous GOM population. The potential positive impacts associated

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<sup>3</sup> Stedman, S. and T.E. Dahl. 2008. Status and trends of wetlands in the coastal watersheds of the Eastern United States 1998 to 2004. National Oceanic and Atmospheric Administration, National Marine Fisheries Service and U.S. Department of the Interior, Fish and Wildlife Service. (32 pages)

<sup>4</sup> See p. 4-47 New Information – Wetlands Section and 4-127 – Discussion of Maintenance and Use of Navigation Waterways

with the proposed action include increases in economic activity and job creation in these same communities. EPA supports the efforts made by BOEM to conduct subsistence research in an effort to document the potential impact on these communities.

**Recommendation:**

EPA recommends BOEM include discussion of mitigation efforts in the FSEIS that addresses impacts to these communities relating to subsistence fishing and oystering in the event of an oil spill. EPA also recommends that BOEM better define in the FSEIS how minority and low-income communities that may be impacted by the proposed action have had opportunities to engage in the decision making process.

**PUBLIC DISCLOSURE**

EPA notes that BOEM is taking a number of steps to enhance to public's ability to comment and provide input into the prelease sale planning process. Public disclosure an essential piece of the NEPA process. EPA encourages BOEM to continue these efforts.

**SEAGRASS / ISLAND RESTORATION**

EPA supports the proposed monitoring and restrictions on the use of bottom-disturbing equipment in areas with seagrass in response to any future oil spill cleanup activities. In addition, we support efforts to identify sand resources for coastal restoration and for evaluating the environmental impacts of exploiting those resources. Specifically, we appreciate the efforts of BOEM in evaluating and leasing OCS sand sources for implementation of the Deepwater Horizon NRDA Whisky Island Restoration Project using sand from Ship Shoal Block 88 and for Phase Two Caminada Headland Restoration Project using sand from South Pelto Blocks 13 and 14.

**EDITORIAL COMMENTS**

- Section 2.3.1.2 – Summary of Impacts – BOEM provides two lists of resources under this section, one list for resources which BOEM's subject matter experts discovered no new information and another list of resources where they did discover new information since the WPA/CPA Multisale EIS and WPA 233/CPA231 Supplemental EISs. EPA notes that Air Quality and Water Quality are under the list of "no new information", however after review of this EIS we note that BOEM does provide a significant amount of new information relating to these resources. Another example (relating to the discussion of the Diamondback Terrapin) is when BOEM states on p. 4-118 that "The search revealed little new information pertinent to this Supplemental EIS", however, EPA notes the Diamondback Terrapin falls on the list on p. 2-9 of resources with new information. EPA recommends clarifying these sections and lists in the FSEIS.
- Chapter 4 Organization – Under each resource, BOEM provides a discussion of the potential impacts on that resource from the proposed action. Included in these sections are discussions of cumulative impacts, summaries of new information, and conclusions. EPA notes that for some resources, the Summary and Conclusion section comes before

the New Information Section. A more logical structure for these sections would be to present the reader with the new information and then present BOEM's summary and conclusions.

- Level of Detail Covered in New Information Sections in Chapter 4 - EPA notes that the New Information Sections in Chapter 4 provide a varying degree of detail (some more some less). Much more information relating to sea turtles (mortality, impacts of PAH's, etc) is provided than for wetlands in these sections. For example, it is stated on p 4-47 that "Numerous studies have been published regarding impacts of the *Deepwater Horizon* explosion, oil spill, and response", but BOEM provides no real details regarding what studies have been conducted and the results of these studies. A summary of these studies and the results would be beneficial to determine the significance of this new information. EPA recommends this level of detail be provided for all new information being considered under this supplemental EIS.

**Region 4 Contacts:**

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